

THE EMBODIMENTS OF THE INVENTION IN WHICH AN EXCLUSIVE PROPERTY OR PRIVILEGE IS CLAIMED ARE AS FOLLOWS:

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1. A window assembly comprising a retractable screen disposed within a framing portion of the assembly, the screen accumulating on and paying out from a spring biased roll disposed within said frame portion, the screen being retractable for egress or cleaning purposes, and available as desired by providing a detent on the opposite frame portion engageable with the screen when in its operable position.

2. The screen assembly of claim 1 which is preferably guided to and from its operative position in guides provided with the jamb, sill or header, and which allows for the manufacture of heavier screens in larger sections without continuously covering of the window.

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3. A closure assembly comprising a retractable screen disposed within a framing portion of the assembly, said framing portion providing a pocket within which the screen is contained in use, said pocket being bound by at least two sides of said framing portion thereby forming said pocket, said pocket being closed by a separate cover closing said framing portion, being positioned in said pocket prior to the cover closing the pocket is installed preferably by clipping detents provided with said cover in a channel provided with at least one of the sides of said framing portion providing the pocket, the screen accumulating on and paying out from a spring biased roll disposed within said frame portion, the screen being retractable for egress or cleaning purposes, and available as desired by providing a detent on the opposite frame portion engageable with the screen when in its operable position.

4. A continuous roll of screen which may be payed out from said roll by an installer or manufacturer to a required predetermined window size, or alternatively patio door size, said screen comprising a free end which allows the installer to pay the screen off of the roll upon which the screen is accumulated course upon course, one end of said screen being disposed at the end of the courses accumulated on the roll from which the screening is payed off and the other end being a free end, said screen having side edges and preferably being manufactured from preferably vinyl-coated fiberglass, the edges of said screen having affixed thereto a generally preferably T-shaped key manufactured from a flexible material, for example polyvinyl chloride, which is affixed preferably by radio frequency welding (or RF welding) with the edges and preferably each of the edges, and in one embodiment at least one edge of said screen, wherein the vinyl coating provided on the screen melds with the polyvinyl chloride key to form a resilient anchor for the screen device within any screen roller assembly.

5. The screen of claim 4 wherein the polyvinyl chloride preferably generally T-shaped key has a head extending from a leg in the shape of a preferred T, or alternatively a Y, or any other convenient shape so long as said shape is compatible with the receiving groove on the handle and roller tube, the leg of said key preferably including two separable portions within which the edges of a screen interfit prior to RF welding wherein the screen is payed off of the roll upon which it is accumulated to the desired dimension of the window or closure such as a patio door wherein the screen will be installed, said screen being cut at that predetermined length cutting also the key proximate at least one end of said screen, said screen thereafter being installed in the screen assembly or alternatively replacing the existing screen in a convenient quick replaceable format.

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6. The screen of claim 4 or 5 wherein the generally key-shaped edge portion of the screen having the two legs which capture the screen therebetween prior to RF welding includes an extension portion between the head of the preferably T-shaped key and the two portions capturing the screen, said extension portion not being RF welded and being utilized to provide a flexible zone and accommodating flexing in the screen assembly in a zone other than the screen, said zone being designed to stretch a predetermined amount and thereby minimize tearing of the screen when subjected to a tensioning load.

7. The screen of claim 4, or 5 wherein said screen is cut to size for installation in a screen assembly with one of the keys being installed in a preferably spring-biased roller upon which the screen will accumulate, and the keyed edge remote said roller being attached to a handle, said roller and said handle each having a compatibly-shaped groove, channel or recess disposed therein to capture the key portion proximate the edges of said screen.

8. The screen of claim 7 wherein a screen roller assembly embodying a cassette is installed within a pocket defined in a closure assembly, said pocket being provided in the window frame sized of a predetermined shape to accept the roller screen assembly which includes all of the necessary mounting pivots and preferably the mounting brackets to mount the roller screen assembly within the pocket in the window frame and preferably proximate the inside corner of the frame portion depending on the window type, said frame portion providing a pocket between said sides within which said roller assembly may be installed utilizing a corner bracket installed where the two sides of the frame portion meet, or substantially at that point.

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9. The screen of claim 8 wherein said frame sections include recesses proximate the distal ends thereof for each of the sides thereof to accommodate a snap-fit cover.

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10. The screen assembly of claim 8 or 9 further comprising grooves disposed adjacent to the framing sections depending on the window type to receive an extension portion of the handle of the screen assembly also engaged with the keyed edges of the screen assembly and at the same time engaging the grooves to maintain the parallelism of the top and bottom or side portions in motion depending again on the window type as the screen is payed out and accumulated on the screen roller contained with the pocket provided in the frame.

11. The screen assembly of claim 8, 9, or 10 wherein the handle portion disposed proximate one edge of said screen assembly includes a latch portion, said latch portion for engaging a compatible detent disposed proximate the edge of a window sash and moveable between a position wherein said latch engages said detent of said window sash whereat when said window sash is slid within its track, said screen will pay out from said roller automatically, and when said window is returned to its closed position said screen will accumulate on said roller automatically, wherein at an unlatched position said window will move between its opened and closed position without the screen, wherein should it ever be required to re-engage the screen with the detent on the window sash, the user merely slides the window to the closed position wherein the latch of said screen will engage with the detent of said window sash automatically.

12. The screen assembly of claim 11 wherein the leading edge of said detent provided with said window sash has a chamfered edge to cause the latch including a hook portion to ride up on said chamfered edge and engage with a compatible hook portion disposed with said detent of said window sash.

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13. A method of manufacturing a screen roller assembly comprising the following steps:

- 1) forming a screen from suitable screen material such as fiberglass and preferably coating said screen with vinyl,
- 2) forming a generally key-shaped anchor for said screen preferably from polyvinyl chloride, preferably said key having a head and a leg comprising two portions and a connector connecting said leg to said head, preferably said head being generally T-shaped,
- 3) separating the two leg portions for receiving the edges of said screen,
- 4) radio frequency welding said leg portions capturing said edges of said screen and preferably melding said vinyl of said screen with the PVC of said key,
- 5) forming a continuous screen to be accumulated on a roll as roll stock to be supplied to the window manufacturer or repair organization,

wherein at any time a predetermined amount of screen may be payed of the roll stock roll sized to a predetermined window opening size which may be easily assembled with the spring-biased roller upon which the screen will accumulate by a manufacturer or by a repair person and which also may be engaged with the handle portion proximate the other edge of said screen, both said roller and said screen handle including a compatibly shaped generally key-shaped receiving portion to receive the head of said key for easy installation or replacement thereof.

14. A roll of improved continuous screening is provided comprising a preferably "T" shaped edge preferably formed from tough flexible material fused to to the screen material along the edges of the screen to which a handle and drum are to be fixed, preferably said "T" edge being provided proximate both edges of a continuous roll of mesh.

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15. The screen of claim 14 wherein the "T" shaped key further comprises a "T" head which will hold the screen into a compatible substantially dovetail-like groove disposed with the roller and/or the handle, a fusing zone where the screen is fused to the "T" with the head being preferably a min. .375 inches, and a body zone between the head and the fusing zone with no screen material for providing the flex and stretching of the screen, wherein the screen cloth is integrally fused to the key over some distance to achieve maximum strength.

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